

Oscar-winner George Gibbs is one of the world's most experienced special effects experts. Nick Barlay picks up a few tips from the master

Special effects wizard

Captain Scarlet, Roger Rabbit and Superman: in a career spanning over 25 years, special effects man George Gibbs has worked closely with all of them. To outsiders, special effects can often appear shrouded in mystery with esoteric knowledge, strange rituals, dangerous chemicals and electronic wizardry playing the key roles.

Although there is more than an element of each of these in Gibbs' work, the term 'special effects' can cover a wide range of skills, from conventional animation to computer graphics via mechanics, prosthetics and animatronics.

Throughout his working life, Gibbs has gone along the traditional special effects route, eschewing state-of-the-art computer graphics, some of which he's come to see as no more than 'five-minute wonders'.

The traditional route in special effects has always involved creating things that work and look right in the real world — even if it's the real world of Brains, Virgil and Lady Penelope in *Thunderbirds*.

Having worked for Strand, the film lighting company, Gibbs was encouraged to get into special effects, despite the fact that, as Gibbs says, 'there weren't any special effects men' in those days.

In 1966, *Thunderbirds* represented Gibbs' first association with Gerry Anderson, the man behind the puppet series who went on to make *Captain Scarlet*. The effects in *Thunderbirds*, says Gibbs, 'still stand up today'.

However, 'puppeteering', says Gibbs, 'was very easy' from the special effects point of view, since it was all 'done with strings' that were evident on screen — it wasn't necessary to hide or disguise them.

The problems really started when Gibbs became the 'first fully-fledged' special effects man on *Battle Of Britain* (1969) which inevitably involved a lot of

work with models. The authenticity of the models in the final version depended heavily on clever editing that blended 'live' action with carefully-constructed and lit scaled-down reproductions.

'In the old days,' says Gibbs, on *Battle Of Britain*-style films, 'everything had to be hidden or done without cables and wires'. If there were problems with visible cables, the only way to disguise them in post-production was to use a process called rotoscoping which basically meant hand-painting each frame to obscure defects. In recent, high-tech films such as *Terminator 2*, on the other hand, cables used for stunts — such as motorcycle

Tricks of the trade

Ever wondered how Clint Eastwood and other Wild West heroes survive multiple batterings with bottles during the mayhem of a bar-room brawl?

The answer is that the bottles aren't made of real glass and though they shatter realistically, they do so without risk of injury.

Normally, the imitation glasses and bottles are made from plastic or sugar glass. A wide range is available such as beer, whiskey and cola bottles and others can be made to order by companies such as Donmar and Rosco.

For those intent on relatively low-tech imitation of the optical and travelling matte effects in films like *Superman*, chromakey could be the answer.

Chromakey is a system used in video and television for superimposition. The technique is often referred to as blue-screen because a subject is first shot against a solid blue background. Other images, recorded separately, can then be 'keyed' onto the blue background as in a news presentation situation.

The saturation and hue of the blue background is important to get optimum results. Chromakey paints are available from most theatre suppliers. The paints are



designed to provide high luminance and can usually be used on most surfaces with one coat.

Making a worthwhile gangster movie can be a real hassle if you don't have any bullet holes.

You don't have to embark on a remake of *Battle Of Britain* or *Air America* to find microdots useful.

A microdet is basically a miniature pyrotechnic that can be disguised under a small fake surface on a wall and then exploded. A series of carefully placed microdots will simulate the effect of a hail of machine gun bullets striking the wall. Like a maroon, its bigger relation, the microdet also makes a bang. Maroons produce a louder bang and can be electrically fired ●



● Specially-designed bottles and theatrical maroons help produce realistic effects.



chase scenes — were disguised in post-production using computers.

Combining images

The conventional way of achieving complex effects, such as Superman flying across the Manhattan skyline, was to use a mixture of live sequences and optical film printing.

The live action included shooting

Superman suspended on a pole arm against a blue screen. The Manhattan cityscape was later filmed from a helicopter and the two images were combined in an optical process using a 'travelling matte'.

With this technique, a piece of processed film 'travels' in sync with raw footage, for instance from the helicopter, during exposure. The result is similar to

● Special effects man George Gibbs (right) with director Roger Spottiswood and a Huey helicopter on location in Thailand for *Air America*.

the chromakey or blue-screen techniques used in video.

The sort of special effects that have to work on screen, ie during a take, only 'really got going in a big way', says Gibbs, on films such as *The Omen* and *A Bridge* ▶



● Excellent effects abound in *Terminator 2*.

◀ *Too Far* — Gibbs worked on both. Those films are the true ancestors of Gibbs' later work on the Indiana Jones films which, he adds, 'were the best films to work on because the team really gelled'.

On *Indiana Jones And The Temple Of Doom*, for instance, teamwork was essential in a bridge-cutting sequence involving the construction of a 250ft long and 150ft high bridge in Sri Lanka and 16 dummies that 'had to be realistic from 6ft away'.

When ten cameras are about to shoot an unrepeatable sequence, every detail has to be right. Similarly, on the recent *Air America*, 'everything', says Gibbs, 'was done for real', including the blowing up of transport planes and helicopters.

Although Gibbs emphasises that sometimes the amount of equipment necessary for special effects is 'horrendous', some of his personal favourites were achieved using simple techniques.

Air bags were used for the character of Doctor Creosote in *Monty Python's The Meaning Of Life*, for example, as he grows bigger and bigger before exploding from over-eating.

In *Who Framed Roger Rabbit* — for which Gibbs won an Oscar — one character, 'flattened' by a steamroller which was built by Gibbs and the effects team, is seen to get up again. A series of springs was used to create the rippling, 'coming back to life' effect.

Gibbs is constantly annoyed by the fact that, 'in our industry, special effects are often thought of as too expensive'. The truth is, that he still stands by Captain Scarlet, adding, 'there's always a cheap way and an expensive way' — good news for aspiring movie-makers.

Indeed, despite creating relatively complicated robotic effects on *Who Killed Roger Rabbit* when the 'toons' interact

DIY special effects

Making waves

A rippling water effect can be created by constructing a wooden frame onto which cellophane can be stretched and secured. A fan directed at the cellophane will then cause it to ripple. Make sure that the cellophane is neither too tight nor too loose.

To enhance this effect, you will need to have lighting along the surface of the cellophane as well as some top lighting.

A low-angle camera will avoid reflections and get the optimum view of your sea or lake. Salt can be added around the shore of the lake to create snow.

Scarface special.

Creating the effect of peeling skin or hideous scars is a relatively simple process with only a few basic ingredients necessary.

The principal ingredients are latex, also known as vulcanised rubber and plaster of Paris.

Once you have decided on the effect you want to create, mould the shape of, for example, a piece of scar tissue using the plaster of Paris. This can be done in a plastic box. Allow the plaster to set naturally. Then, using a paint brush,

brush liquid latex into the shape. The number of layers that are brushed in depends on how thick the scar tissue needs to be.

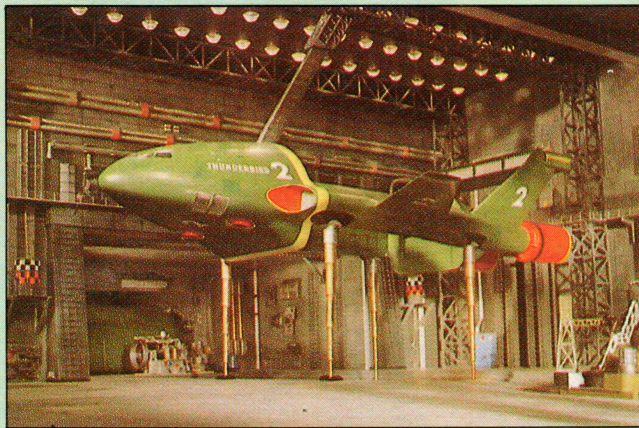
Next, dry the latex using a hair drier. Cut the surplus latex off and remove the remaining latex from the mould. Using liquid skin, available from chemists, paint the latex.

Plasticine can also be used to mould the initial shape after which plaster is applied over it. Once the plaster has set, the Plasticine can be removed from within, leaving the desired shape.

Look, no strings

Some commonly occurring problems in special effects work have the simplest of solutions. When shooting models of the type used in *Thunderbirds* for instance, it is often very difficult to select the right kind of wire to be used as well as to hide them in the shot.

The best type of wire to use is piano wire or a fishing line. To disguise these in shot, they will need to be of the same colour as the background. One method is to apply hairspray to the wire. This creates a sticky surface onto which powder paint that matches the background can be applied.



● *Thunderbirds* were go for George Gibbs in the 1960s.

with real objects, a great deal of effects work centres on basic skills such as sculpting, making moulds with foam rubber and fibreglass, and simple mechanisms using bicycle pumps and air bags. It is these skills that will, more than likely, outlast high-budget computer techniques such as 'morphing' on *Terminator 2*.

Gibbs, with a trail of Oscars and BAFTA awards behind him, now faces his

first Christmas without work. *Alien III* was the last major movie he worked on and he will no doubt miss having a 55-strong team with him such as on *Indiana Jones*.

For Gibbs, the movie-making situation is summed up when friends at Pinewood Studios come up to him and say: 'Crikey, George, if you're not working, things must be bad' ●

Contacts

● Rosco, Blanchard Works, Kangley Bridge Road, London SE26 5AQ, tel: 081-659 2300. Everything from lighting to pyrotechnics, smoke machines to stage blood.

● Donmar, 54 Cavell Street, Whitechapel, London E1 2HP, tel: 071-790 1166. All aspects of technical theatre and special effects.

● Midland Theatre Services, Junction 1 Industrial Estate, Dartmouth Road, Smethwick, Birmingham B66 1AX, tel: 021-525 4545. A Rosco dealer and theatre supplier in the Midlands with a wide range of accessories for lighting and effects.

● AJS Theatre Lighting and Stage Supplies, Hightown Industrial Estate, Crow Arch Lane, Ringwood, Hants BH24 1ND, tel: 0425 470888. As above, including products such as stage blood. AJS can also handle special requirements.